

AMENDMENTS TO THE CLAIMS

The listing below of the claims will replace all prior versions and listings of claims in the present application:

Listing of Claims:

Claim 1 (currently amended): A repeatedly engageable and disengageable friction clutch comprising:

a housing rotatable about a predetermined axis;

a pressure plate non-rotatably connected to said housing and axially movable relative thereto in a first direction to engage the clutch and in a second direction to disengage the clutch;
and

a diaphragm spring tiltably disposed within said housing in a continuously elastically deformed condition and before the clutch is installed , wherein said diaphragm spring is mounted on said pressure plate in said elastically deformed condition before the clutch is installed in and put to use in a power train of a motor vehicle so that at clutch operational readiness, but not yet actuated, the clutch is disengaged.

Claim 2 (canceled)

Claim 3 (canceled)

Claim 4 (currently amended): A clutch in accordance with claim 1, wherein said pressure plate includes a ring-shaped ~~supporting portion~~ support region for supporting said diaphragm spring, and ~~for supporting tensioning~~ biasing means that is radially offset relative to said ~~supporting portion~~ and is ~~arranged to maintain~~ support region and that maintains said diaphragm spring ~~on~~ against said pressure plate in a ~~resiliently stressed~~ an elastically deformed condition.

Claim 5 (currently amended): A clutch in accordance with claim 4, wherein said ~~tensioning~~ biasing means is axially fixed ~~against movement~~ relative to said pressure plate ~~as seen in the direction of said axis~~.

Claim 6 (currently amended): A clutch in accordance with claim 4, wherein said ~~tensioning~~ biasing means includes an annular array of elements that are ~~rigid~~ rigidly connected with said pressure plate and extend ~~in at least~~ axially through openings provided in said diaphragm spring, ~~said~~ and engage a side of the diaphragm spring ~~having a side~~ that faces opposite to said pressure plate, ~~and said elements~~ supportingly engaging said diaphragm spring at said side thereof.

Claim 7 (currently amended): A clutch in accordance with claim 6, wherein ~~said elements of said tensioning~~ biasing means are formed by pins riveted to said pressure plate and include enlarged ~~portions~~ regions disposed at said a side of said diaphragm spring and being opposite to the pressure plate and enlarged at least in a circumferential direction of said , on which enlarged regions the biased diaphragm spring to ~~constitute axial supports for portions of~~ said spring is axially supported.

Claim 8 (currently amended): A clutch in accordance with claim 1, wherein said diaphragm spring includes an annular main portion, and ~~tongues~~ tongues extending radially inwardly from an inner edge of said main portion at least ~~substantially radially inwardly toward said axis, at least some of said~~ , wherein in a region of at least individual tongues ~~being arranged to maintain said~~ spring ~~in an elastically stressed condition~~ support is provided to ensure diaphragm spring bias.

Claim 9 (currently amended): A clutch in accordance with claim 1, ~~further comprising a rotary clutch disc having friction linings that are subject to wear in response to repeated engagement and disengagement of the clutch, said pressure plate being adjacent to and being movable into and out of repeated frictional contact with said friction linings in response to repeated engagement and disengagement of the clutch, and further including compensating means~~

~~arranged~~ including a compensation device provided between the diaphragm spring and the clutch housing to compensate for wear of said at least clutch disk friction linings ~~and disposed between said housing and said diaphragm spring.~~

Claim 10 (currently amended): A clutch in accordance with claim 9, wherein said ~~compensating means~~ compensation device includes at least one ~~resilient sensor at least indirectly bearing upon~~ spring axially supported by said diaphragm spring ~~in the direction of said axis~~ in the engaged condition of the clutch, and an ~~annular adjusting member interposed~~ ring operative between said housing and said diaphragm spring ~~and arranged to shift~~ axially displace said diaphragm spring relative to said housing ~~in the direction of said axis and through a distance that is a function of the extent of~~ friction lining wear at least of said friction linings.

Claim 11 (currently amended): A clutch in accordance with claim 1, further including at least substantially concentric first and second ring-shaped fulcrums respectively provided on said housing and said pressure plate, wherein said diaphragm spring ~~including~~ includes a first radially outer annular portion ~~tiltably engaging said first fulcrum and a second annular portion tiltably engaging said second fulcrum~~ pivot region that is supported on a fulcrum provided on the housing, and wherein the diaphragm spring further includes an inwardly-lying annular region that cooperates with an annular abutment carried by the pressure plate.

Claim 12 (currently amended): A clutch in accordance with claim 11, wherein one of said fulcrums is nearer to said a clutch longitudinal axis than the other of said fulcrums.

Claim 13 (canceled)

Claim 14 (currently amended): A clutch in accordance with claim ~~13~~ 1, wherein said ~~disengaging means includes means for~~ diaphragm spring is elastically deforming said diaphragm spring deformed upon engagement of the clutch.

Claim 15 (currently amended): A clutch in accordance with claim 1, ~~further including a rotary~~ wherein the clutch is mounted on a counterpressure plate coaxial with said pressure plate, wherein a clutch disc interposed provided between said plates and having first and second the counterpressure plate and the pressure plate has at least two friction linings respectively adjacent said pressure plate and said counterpressure plate, and a resilient back support lining spring is provided axially between said first and second the at least two friction linings.

Claim 16 (currently amended): A clutch in accordance with claim 15, wherein ~~said back support is arranged to oppose movement of said first friction~~

~~lining toward said second friction lining in response to movement of said pressure plate toward said counterpressure plate under the bias of said diaphragm spring during engagement of the clutch, and further including at least one resilient sensor arranged to oppose said movement of said first friction lining~~ the combined pressures applied to the diaphragm spring by the axial force produced by a lining spring as well as by the axial force produced by the at least one sensor spring operate in the same axial direction.

Claim 17 (currently amended): A clutch in accordance with claim 16, wherein ~~said diaphragm spring has a set of resilient tongues and said at least one sensor is arranged to bias said tongues axially of the clutch in a first direction, and further including means for engaging the clutch including means for urging said tongues in a second direction counter to said first direction~~ the axial force produced by the lining spring and the axial force exerted on the diaphragm spring by the at least one sensor spring and resulting from the axial force produced by the diaphragm spring tongues for engaging the clutch are in opposite directions.

Claim 18 (currently amended): A clutch in accordance with claim 15, wherein ~~said resilient back support has a characteristic curve and further including at least one resilient sensor arranged to detect the extent of wear of said friction linings in response to repeated engagement of the clutch that involves tilting of said diaphragm spring relative to said pressure plate with~~

~~attendant stressing of said diaphragm spring against the opposition of said sensor and said back support~~ a lining spring characteristic curve and the installation condition of the sensor spring in reference to the engagement course of the clutch are coordinated in such a way that upon the occurrence of wear on at least the friction linings of the clutch disk an operating engagement for required for tilting the diaphragm spring is greater than the oppositely directed axial engagement force and the resulting axial force acting on the diaphragm spring which is produced at least by the lining spring and the sensor spring force.

Claim 19 (currently amended): A clutch in accordance with claim 18, wherein said characteristic curve is related to the condition of said at least one sensor in such ~~away~~ a way that the force that is required to deform said diaphragm spring during engagement of the clutch exceeds an axial force furnished by said ~~back support~~ lining spring and said at least one sensor spring.

Claim 20 (currently amended): A clutch in accordance with claim 19, ~~further including stressed~~ wherein the resulting axial force is additionally produced by leaf springs interposed that are axially biased between said housing and said pressure plate and ~~arranged to assist said axial force, said leaf springs being arranged that serve at least~~ to transmit torque between said housing and said pressure plate.